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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,953	08/22/2003	Vipin Samar	OR03-10201	8253

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EXAMINER

LEE, WILSON

ART UNIT	PAPER NUMBER
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2163

MAIL DATE	DELIVERY MODE
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08/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/645,953

Applicant(s)

SAMAR, VIPIN

Examiner

Wilson Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 4-6, 8, 9, 12-14, 16 are rejected under 35 U.S.C. 102(e) as being anticipated by De Vries (6,928,428).

Regarding Claim 1, De Vries discloses a method for protecting an item of private information in a database, wherein the method comprises:

receiving (input data set. When the data is inputted to the system, it means the system receives the data) the item of private information (Col. 5, lines 3-24), wherein the item of private information is used as a key for retrieving data from the database (Col. 2, lines 14-18);

creating a hash of the item of private information at a database (Col. 2, lines 1-18), wherein creating the hash further comprises checking a column attribute for a column, which stores the item of private information, in the database to determine that "privacy" is enabled for the column, and only upon privacy being enabled for the column ("...input data set 310...as a flat database table in row/column format (i.e., where columns represent fields of the input data, such as contact name...", Col. 5, lines 3-24)¹,

¹ De Vries teaches that the input data set as the item of private information stored in the column of the table.

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creating the hash, and wherein the hash is a one-way hash (“...produces a hash value that is one-way hashing function of at least some of the input data set fields...”, Col. 5, lines 24-35); and

storing the hash of the item of private information in the database (Col. 5, lines 3-35), wherein the hash of the item of private information (refer to “confidential information” such as contact name, calendar date/time, location, etc) is a unique lookup key within the database (“the query data structure 220 takes the form of a set of query hash and answer pairs, which is constructed from an input data set 310 that represents the user context data 210...”, Col. 5, lines 3-24 and “...using the resulting query hash as a look up index to the associated answer in the querying data structure, and acting on the answer...”, Abstract), and wherein the item of private information does not exist in the database in plain-text form (“without making the confidential information available to un-trusted information processing servers in an intelligible form (i.e. plain text)”, Col. 1, lines 59-63).

Regarding Claim 4, De Vries discloses that processing a query containing the private information involves:

receiving (input data set. When the data is inputted to the system, it means the system receives the data) the item of private information (Col. 5, lines 3-24);

creating a hash of the item of private information (“...query hash and answer pairs...are produced...”, “The resulting query hash value”, Col. 5, lines 3-35; Col. 2, lines 1-18); and

querying the database using the hash of the item of private information (“querying of confidential information”, “hashing the query”, using the resulting query hash”, “to the query hashes in the query data structure by reverse hash”, Abstract; Fig. 3; Col. 2, lines 7-18;).

Regarding Claim 5, De Vries discloses that the item of private information can include a person's name (“contact name”, Col. 5, lines 3-13).

Regarding Claim 6, De Vries discloses that multiple items (“input data, such as contact name, calendar date/time, location, etc.”, Col. 5, lines 3-13) of private information can be combined prior to creating the hash (Examiner's note: the input data is prior to the hash. See Col. 5, lines 24-35).

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Regarding Claim 8, De Vries discloses that the database is a Lightweight Directory Access Protocol (LDAP) database (“...devices 120-123 and information services can use standard data networking protocols...LDAP”, Col. 3, lines 29-33).

Regarding Claim 9, as discussed in details in the preceding rejection of claim 1, De Vries meets the limitation of claim 9.

Regarding Claim 12, as discussed in details in the preceding rejection of claim 4, De Vries meets the limitation of claim 12.

Regarding Claim 13, as discussed in details in the preceding rejection of claim 5, De Vries meets the limitation of claim 13.

Regarding Claim 14, as discussed in details in the preceding rejection of claim 6, De Vries meets the limitation of claim 14.

Regarding Claim 16, as discussed in details in the preceding rejection of claim 8, De Vries meets the limitation of claim 16.

Claim Rejections – 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Vries (6,928,428) in view of the term dictionary in Javvin (This reference has been made in record. Please see previous Form 892 dated 02/05/2008).

Regarding Claims 2 and 10, De Vries essentially discloses the claimed invention but does not explicitly disclose creating the hash can include creating either Secure Hash Algorithm-1 (SHA-1) or Message-Digest algorithm 5 (MD5) hash. However, Javvin dictionary teaches that Message-Digest algorithm 5 (MD5) (designed in 1991) is a popular algorithm in security application and to check the integrity of files. And Javvin also discloses that SHA-1 is recommended by cryptographers to overcome

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some flaws in MD5. It would have been obvious to one of ordinary skill in the art at the time the invention has been made to use either MD5 or SHA-1 in De Vries in order to provide additional security purpose since both MD5 and SHA-1 are widely used and known to a skilled in the art.

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Vries (6,928,428) in view of Tuvey et al. (2002/0019849).

Regarding Claims 2 and 10, De Vries essentially discloses the claimed invention but does not explicitly disclose creating the hash can include creating either Secure Hash Algorithm-1 (SHA-1) or Message-Digest algorithm 5 (MD5) hash. However, Tuvey teaches that Message Digest algorithm 5 (MD5) is one way hash algorithm being used for resisting collision (paragraph 0053). It would have been obvious to one of ordinary skill in the art to have used MD5 such standard one way hash algorithm in De Vries in order to resist collision as taught by Tuvey.

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Vries (6,928,428) in view of Trostle (5,919,257) (This reference has been made in record. Please see previous Form 892 dated 02/05/2008).

Regarding Claims 3 and 11, De Vries discloses that the hash of the item of the private information² or confidential information is produced before performing the lookup ("...query comprising a set of the query input values is hashed...The hash result of the query is used as look-up into the set of the query...", Col. 2, lines 7-18). De Vries' above teaching matches the definition of "transparent to application" written in the instant specification on Page 6, line 23 to Page 7, line 2.

Although De Vries does not literally write the words "transparent to an application", however, Trostle discloses a networked workstation for detecting intrusion to provide a more secure user friendly technique. Trostle teaches an advantage of transparency is such as detecting illicit changes to the executable files resident on the workstation (Col. 3, lines 23-30). It would have been obvious to one of ordinary skill in the art to have used Trostle's transparency method in De Vries in order to attain the advantage of detecting illicit changes on the workstation as taught by Trostle.

² In Col. 2, line 12, De Vries teaches that the data is confidential information which means private information.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 8-14, 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Wilson Lee/
Primary Examiner, Art Unit 2163

8-2-08